ABSTRACT

A lung-assist apparatus includes a tubular housing, a tubular nozzle therein, and a first valve disposed between the housing and nozzle. The housing is implanted across a bifurcation such that the nozzle extends from a first branch communicating with a healthy region of a lung towards a main passage, and terminates proximate a lateral opening in the housing that is disposed within a second branch communicating with a damaged region of the lung. During inhalation, the first valve opens to allow air flow into the first branch, and closes during exhalation to force air through the nozzle, thereby inducing a vacuum for drawing air from the damaged region. A second valve in the second branch opens during exhalation to draw air from the diseased region, and closes during inhalation to prevent air from being drawn into the damaged region.